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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,339	04/18/2001	Takahiro Fujioka	HITA.0048	8737

7590

12/19/2002

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EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 12/19/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

11

Office Action Summary

Application No.

09/836,339

Applicant(s)

FUJIOKA ET AL.

Examiner

Srilakshmi K. Kumar

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Someya et al (US 5,091,784).

As to independent claims 1 and 5, a liquid crystal display device having a liquid crystal display panel and liquid crystal drive circuitry, wherein the liquid crystal drive circuitry comprises; an image input terminal with an image signal being input thereto (col. 5, lines 30-59); a clock input terminal with an external clock signal being input thereto (input into Fig. 2, item 8, clock generator); a clock compensation circuit (Fig. 2, item 8, clock generator) for generating an internal clock based on the external clock signal, the internal clock signal swinging from a first voltage to a second voltage lower than the first voltage; the clock formation circuit being operable to correct the internal clock based on the external clock (col. 6, line 61-col. 7, lines 5, 41-52), Someya discloses in col. 6, line 61-col. 7, line 5, where based on input into the clock generator, different output clocks are generated. It would have been obvious to one of ordinary skill in the art that the internal clock would be based on the external clock and thus appropriately corrected;

a data storage circuit for storing therein an image signal at a timing of a voltage change of the internal clock signal (Fig. 2, item 25); a data bus causing the image signal to be output from

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the data storage circuit (col. 10, lines 15-50), and a voltage select circuit for selecting from the image signal of the data bus a voltage used to drive the liquid crystal display panel and then outputting the voltage selected (Fig. 15, item 107).

As to dependent claims 2 and 6, limitations of claims 1 and 5, and further comprising, wherein the clock compensation circuit has a phase locked loop circuit (Fig. 31, item 121).

As to dependent claims 3 and 7, limitations of claims 1 and 5, and further comprising, wherein the clock compensation circuit has a delay locked loop circuit. Although Someya et al do not disclose the delay locked loop circuit, it would have been obvious to one of ordinary skill in the art to incorporate this feature as the delay locked loop circuit is advantageous as it allows for phase shift as opposed to no shifting.

As to dependent claims 4 and 8, limitations of claims 1 and 5, and further comprising, wherein the data bus comprises two systems of signal lines (Fig. 2, input from sample-hold circuit and terminal 29).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Srilakshmi K. Kumar** whose telephone number is **(703) 306 5575**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

or faxed to:

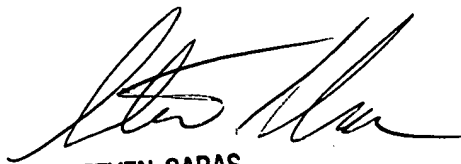
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Srilakshmi K. Kumar
Examiner
Art Unit 2675

SKK
December 13, 2002


STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600